



Integrated Resource Plan
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INTRODUCTION

The City of St. George entered into a long-term power purchase contract August 1964 with Western Area Power Administration (WAPA). This contract requires that all customers purchasing electric energy under a long-term firm power contract from WAPA implement Integrated Resource Planning (IRP) in accordance with specific terms in the legislation.

Integrated Resource Planning is defined as a comprehensive and systematic blueprint developed by the supplier, distributor or end user of the energy. The blue print will evaluate demand and supply side resource options and economic parameters and determine which options will best meet their energy goals at the lowest reliable and reasonable energy, environment and societal costs. WAPA will use the IRP's of their customers to prepare an annual report to congress that will show estimated energy savings and renewable resource benefits.

The City of St. George has completed this IRP to address the energy resources planning for the City. The planning horizon for this IRP is posed as five years. This IRP is a dynamic process, requiring continual evaluation of alternatives as load resource option and public input changes.

SECTION ONE

GENERAL

SYSTEM PROFILE AND BACKGROUND

St. George was incorporated in 1862 and is the county seat of Washington County, Utah. According to the City's Planning Department, St. George had an estimated 2004 population of approximately 65,000 compared with a 1990 population of approximately 28,502 for a total population increase of 100% over the period. St. George's economy is based primarily on tourism and recreation due to the proximity of Zion's and Bryce National Parks, various other state and national parks and recreation areas, and a mild winter climate. The mild winters are followed by arid, hot summers.

St. George is governed by a Mayor and a five-member City Council, each elected at-large for four-year staggered terms. The Mayor is the chief administrative and executive officer of St. George. A Director of Energy Services, appointed by the Mayor and City Council, manages the electric system and supervises a staff of approximately 50 employees.

ELECTRIC SYSTEM DESCRIPTION

St. George established its electric system in 1942. The St. George electric system has a service area of approximately 40 square miles and includes approximately 250 miles of 69 kV, 13.2 kV and 7.62 kV transmission and distribution lines. Electric power and energy is currently provided to the St. George electric system over the facilities of Utah Associated Municipal Power System's (UAMPS) Central-St. George 138 kV Transmission Project. The Skyline Substation is owned and operated by St. George and transforms the voltage of power delivered to St. George from 138 kV to 69 kV. St. George's 18 distribution substations are served via a 69 kV loop from the Skyline Substation and the River Substation (which is a part of the UAMPS Central-St. George 138 kV Transmission Project).

ELECTRIC SYSTEM CUSTOMERS

At the end of its most recent fiscal year (June 30, 2004), the St. George electric system served approximately 23,198 customers. No single customer accounted for more than 2.5% of total electric system revenues. The customer profile combined with the arid hot summers cause electric system to peak during the summer months and then decrease during the rest of the year. This load profile pushes the City to have a significant amount of peaking capacity during the summer months.

SOURCES OF POWER AND ENERGY

St. George generates a portion of the electric power and energy sold through its electric system and enters into contract purchases from outside suppliers for the majority of the power and energy needed to meet the requirements of its customers. St. George's current electric generating facilities consist of a 14 MW diesel generating facility and an 11 MW diesel generation facility that tie directly into the 69 kV transmission loop around the City. The diesel generating facilities are generally utilized to provide voltage support for the operation of St. George's distribution system and also provide peaking power and firm back-up for non-firm energy purchases.

St. George meets the balance of its electric power and energy requirements through: (1) the purchase of federal power and energy generated by the Colorado River Storage Project (CRSP); (2) power and energy from San Juan Project pursuant to a "take-or-pay" contract with UAMPS; (3) the purchase of electric power and energy through the UAMPS Firm Idaho Power and Wind Project; (4) the purchase of firm and non-firm electric power and energy transmitted by UAMPS' Craig-Mona Transmission Project; (5) the purchase of electric power and energy from other members of UAMPS through the UAMPS Power Pool; and short term power purchases from Pacific Power Marketers and Western System Power Pool.

Also, St. George recently entered into a long term power purchase contract with Deseret Generation & Transmission Cooperative (DGT). This contract provides St. George with up to 75 MW of capacity and energy to meet its base load, intermediate and peaking requirements and permits seasonal variations in purchases. DGT's obligation to sell capacity and energy under this contract is contingent on the operation of Hunter Unit 2 and DGT's Bonanza Power Plant. This contract has a term of 19 years. St. George is also participating with DGT in the proposed construction of an 86 MW circular fluidized bed coal unit located near the existing Bonanza Unit. Based on load forecasts, St. George is in need of more peaking resources.

FINANCIAL AND OPERATING INFORMATION

The rapid increase in St. George's population during the 1990s produced corresponding increases in the energy requirements of its electrical system. St. George met these increases through the addition of short and long term contracts. Throughout most of the 1990s, St. George was able to make market purchases at advantageous prices.

The dramatic and unprecedented increase in electric energy prices in the Western United States that began in the spring of 2000 had a significant negative impact on the financial operations of the St. George electric system. The system experienced an operating loss in the last half of fiscal 2000 and significant operating losses in fiscal 2001 and 2002. These losses totaled over \$13.5 million and resulted in a reduction in the retained earnings of the electric system of over \$15 million. The losses were directly attributable to increased purchased power expense.

St. George has taken a number of steps to restore the financial integrity of its electric system. *First*, the City increased its electric rates in three ways: (1) effective May 1, 2001, a 50% power cost adjustment was imposed for the peak demand periods in each year from May 1 through September 30; (2) effective February 15, 2002, an across the board increase of 40% was made to all electric rates; and (3) effective February 15, 2002, impact fees (the fees charged to new service connections resulting from new construction) were increased 51%. *Second*, St. George has cut its budgeted capital expenditures for the electric system by 50% for the current fiscal year. *Third*, the management structure of the City's water and power departments was changed to separate management responsibility for the electric system from that of the water utility and a new Director of Energy Services was appointed. *Fourth*, effective April 2003, another 10% across the board rate increase was approved. *Fifth*, the City has instituted various procedures to more actively manage its purchase power expense, including hiring additional power schedulers, and has renegotiated certain of its power purchase agreements and has entered into the power purchase contract with DGT (described above) to further stabilize its long-term power supply costs. St. George represents that the electric system has operated with positive cash flows and it is expected to produce positive margins for the near future years.

The City of St. George entered into a long term power sales agreement with WAPA in August 1964. In October 1995 the City assigned this contract to UAMPS to administer as part of a cooperative pool. In April of 2005, the City took back the administration of this contract and currently manages the contract directly with WAPA. Prior to April 2004, UAMPS performed the City's load forecasting and management and thus prepared the WAPA IRP taking into account all of the UAMPS pool participating utilities. As part of the City resource planning, the City has decided to diversify outside of UAMPS and manage the resource portfolio in-house. As part of the direct management of the WAPA CRSP contract, the City is now required to prepare its own IRP. Integrated resource planning has been used to re-shape and diversify the City's resource portfolio under the new management.

SECTION TWO

LOAD FORECASTING

Since October of 2002, the City of St. George has been preparing load forecasts using in-house personnel. Prior to this date, the load forecasting was prepared by UAMPS. The City prepares the current forecast by first analyzing the historical loads, which is compiled into hourly readings. Computer modeling is then used to adjust the historical data by the percentages desired to arrive at a forecasted load, both peak and total energy. The forecasted load is then compared with actual loads to continue to calibrate the model. The current model comparison has shown that the forecast is accurate with in a 1.5% band width.

The data sources used in the model are obtained from meter readings, SCADA and weather data. The staff also uses demographic information provided by the State and City Planning Department (building permit data). The data is gathered from various sources and stored within one data base. Using the computer model and historical data the following forecasts, shown in Figures 1, 2, and 3 have been prepared.

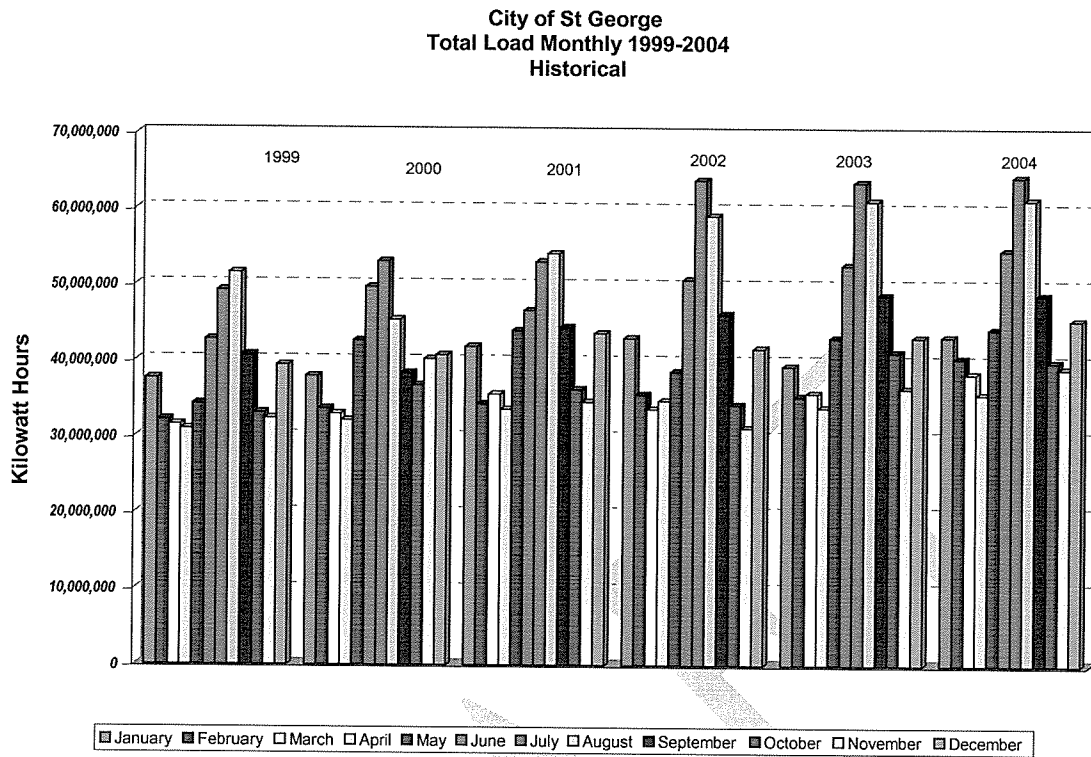


Figure 1

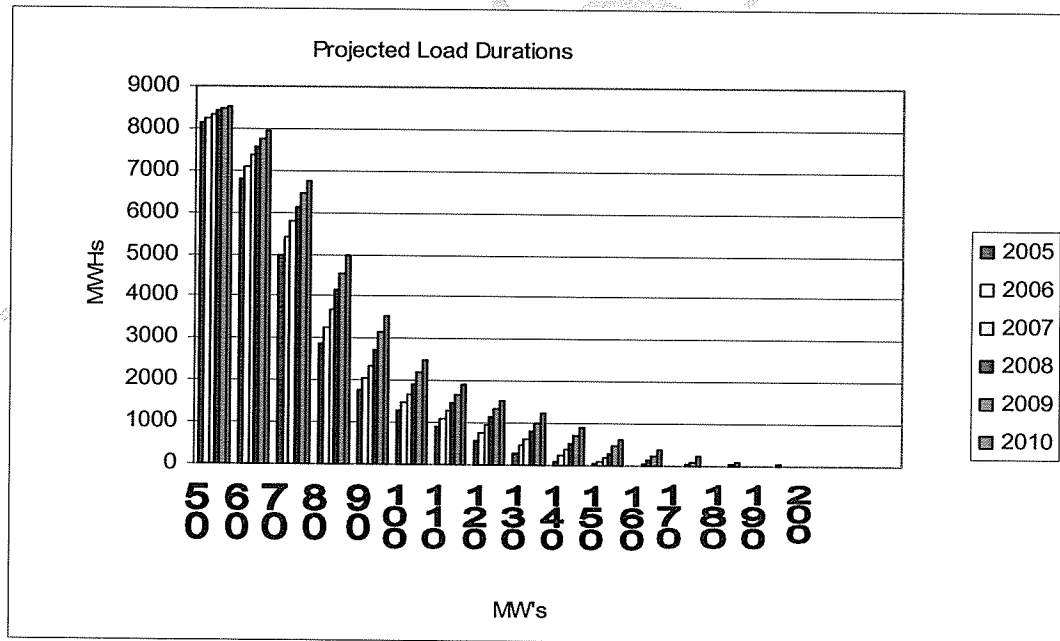


Figure 2

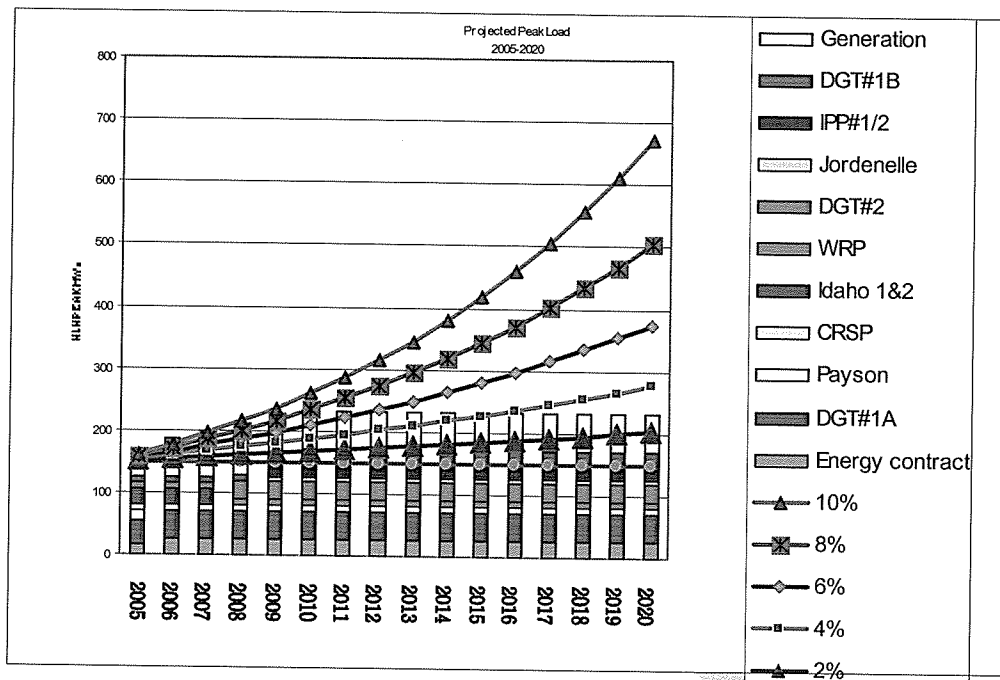


Figure 3

Based on the results of the modeled forecast, the City of St. George has taken the data to determine what type and how much of each resource is needed to meet the forecasted demand.

IDEAL RESOURCE MIX

There are three categories of resources based on load characteristics; base load, peaking and intermediate. A base load coal unit is designed to yield a maximum operating efficiency at continuous operation. This optimization is normally accomplished by a considerable initial expense. Since it is designed to run continuously, this level of initial expense is justified considering the overall economics. A peaking unit, such as a natural gas turbine is designed to operate infrequently, and hence the initial expense is greatly reduced with the trade off that it operates at higher expense and perhaps lesser efficiency. A peaking unit typically cycles on and off on a daily or hourly basis, and is designed to start up quickly on short notice. An intermediate unit such as a combined cycle natural gas turbine is designed to operate a maximum load through the day and easily adjust to minimum load at night. Its initial cost is intermediate between that of a peaking and base load unit, and its operating expense is also intermediate between that of a peaking and base load unit. A peaking unit typically has an annual capacity factor of less than 40%, an intermediate unit between 40% and 60% and a base load unit greater than 60%.

Based on this forecast and criteria, the base load, intermediate and peaking resource needs for the City are shown in Figures 4 and 5.

Figure 4

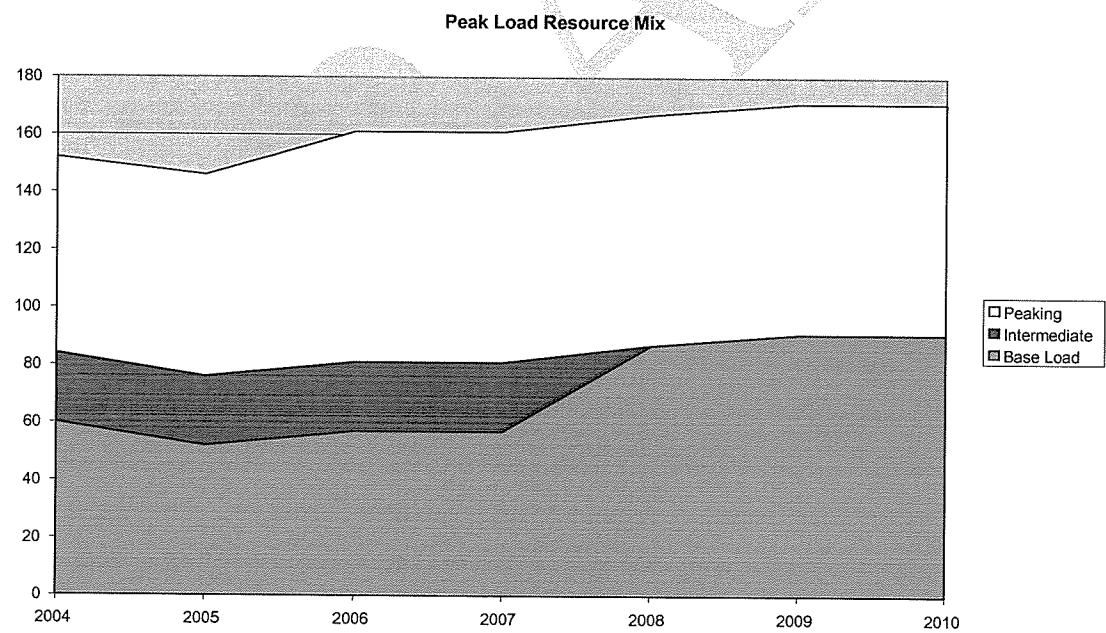
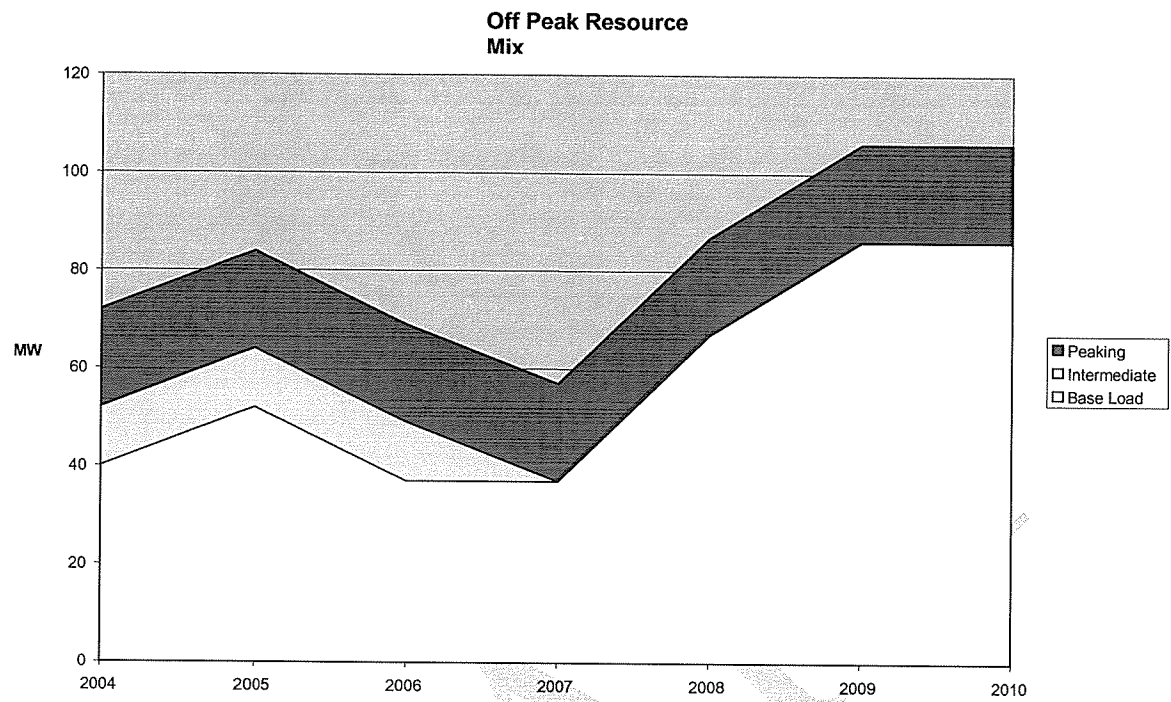


Figure 5

Clearly, some of these objectives may be in conflict with each other. The City will have to balance all these objectives to reach a stable intergraded resource plan. Demand side and supply side options, in various combinations, will compete for selection into the IRP.

In order to meet the City's objectives and to guide in selection of a resource to be included in the City's resource mix, the resource must meet the following criteria.

- ✍ Financial: The analysis of the impact on the City's rates includes such factors as purchase costs, operating costs, financing costs and other costs or revenues that may be unique to a specific alternative.
- ✍ Operational: All alternatives will be evaluated according to how well they meet the City's load needs.
- ✍ Reliability: Reliability is basically a measure of how each alternative meets its performance objective. For a supply side resource, reliability measures the availability of the unit to operate when called upon. For a demand side resource reliability indicates the ability of an alternative to reduce demand when requested.
- ✍ Environmental: Each alternative will be judged and ranked according to their overall environmental impacts. The goal is to minimize the overall environmental impact.
- ✍ Flexibility: Flexibility is a measure of how well an alternative can adapt to changing requirements. For example, some supply side resources can be obtained only in discrete sizes. A purchase contract can be adapted to match exactly the needs of the requestor. Demand side resources are not as flexible as supply side alternatives but these benefits will vary over time depending on customer usage.
- ✍ Short-term and Long-term: By its very nature, an electric utility has both short-term and long-term obligations to its customers. Both considerations are important when evaluating alternatives. Long-term resources can help the City avoid market volatility.
- ✍ Diversity: Diversity in type and location of resources balances the risk during economic swings and environmental impacts plus opens up additional market availability.

SECTION 3

RESOURCES AND OPTIONS

Given the resource needs of the City detailed in the previous section, the City has used the following integrated resource criteria and objectives in the selection and acquisition of resources to meet the needs:

- ✍ Minimize impacts on rates to customers
- ✍ Match operation needs
- ✍ Maintain system reliability
- ✍ Minimize adverse environmental impacts
- ✍ Ensure flexibility
- ✍ Ensure short-term and long-term needs are met
- ✍ Maintain diversity in resource mix and market areas. Avoid large percentages of market exposure.

Using the evaluation criteria to evaluate the City's current resources and potential future resources the resource mix in Figure 6 has been developed.

Energy Resources and summertime peaks (in MW)

Resource Type	System Peaks	Historical					Current	Projected				
		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	Forecasted Peak	119	124	129	134	143	152	161	171	181	191	203
Intermediate	Jordanelle - Renewable	0	0	0	0	0	0	0	0	4	4	4
Base	San Juan	16	16	16	16	16	3	0	0	0	0	0
Base	Hunter	2	2	2	2	2	0	0	0	0	0	0
Intermediate	Idaho - Renewable	22	22	22	22	22	22	22	22	0	0	0
Peak	IPC	2	2	2	2	2	2	2	2	0	0	0
Peak	Wind - Renewable	0	0	0	0	2	2	2	2	3	3	4
Peak	Payson					18	15	4	0	13	13	13
Base	CRSP/WRP - Renewable	29	29	29	29	29	29	29	29	29	29	29
Base	DGT	0	0	0	0	40	50	50	50	50	50	50
Peaking	St. George Diesel	21	21	21	21	21	21	0	4	8	18	21
Peaking	St. George Gas Turbine*	0	0	0	0	0	0	38	40	40	40	40
Base	DGT 2 Project**	0	0	0	0	0	0	0	0	0	30	30
	DSM Activities	0	0	0	0	0	3	4	5	5	7	7
	Market Purchases/Sales***	27	32	37	40	-9	5	10	17	25	-3	5
	Total	119	124	129	132	143	152	161	171	156	191	203

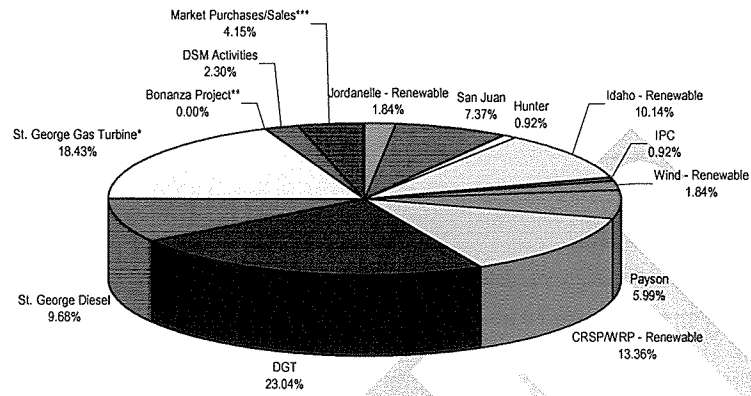
* Reflects the City's operation of a new gas turbine project

**Reflects anticipated Bonanza Project

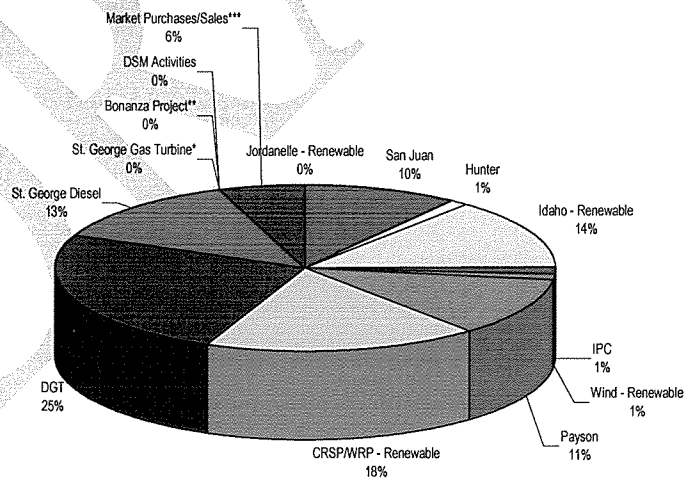
***Reflects spot-market exposure for purchase power or (excess sale of System Power)

Figure 6

2010 Energy Resources



2004 Energy Resources



SECTION 4

ON GOING AND PROPOSED DEMAND SIDE ACTIVITY

Based on the developed resource mix outlined in the previous section, the City has a goal of reducing the forecasted peak demand by 5 to 7 MW using conservation efforts and demand side management activities. In 2002, the City hired a Water and Energy Conservation Coordinator. This position is dedicated to developing conservation and demand side management activities for both the Water and Energy Services Departments. The following Energy Services Department programs or activities have been developed and are currently being promoted:

On going:

- ✓ Key Account – energy audits: The staff has established a Key Account list of customers and has met with most of these customers to perform energy audits and offer recommendations regarding energy savings. The Conservation Coordinator continues to meet with these customers to follow up on implantation of the energy saving suggestions/activities. The staff continues to be trained on energy efficiency and new technologies.
- ✓ Dixie Conservation Alert Program: The staff, working with the Utah State Energy Office, has developed a staged energy conservation program during peak power demand periods of the summer months. The program was implemented in the summer of 2004. The program consists of three stages of demand side conservation designated by green, yellow or red days. (See appendix for program details). The first stage, green, is a voluntary level and recommends basic conservation measures. The first stage is triggered as soon as the public announcements start and news articles are published. The second stage, yellow, is more of a semi-mandatory conservation level and recommends more stringent conservation efforts. The yellow level has a goal of 5 to 10 MW of peak shaving. This level is triggered by temperature and energy load levels. The third state, red, is a mandatory level of conservation efforts and is made mandatory due to system supply shortages. The third state is triggered by a system failure, loss of transmission into the area. This program produced good results during the summer of 2004. The City was able to maintain almost the same peak as the summer of 2003 with the area building growth exceeding 7.5%. Alert levels are published daily in the local newspaper and aired on radio as well as on the state and local TV news programs.
- ✓ Air Conditioning load shaving/load management: The City in 2004 prepared a feasibility study to determine the benefits versus costs of installing load management equipment on residential and small commercial customer's air conditioning units. This equipment would allow the City to cycle the units during peak periods to reduce the peak. (See study results in appendix). The results indicated the benefits did not outweigh the costs and thus the City has not pursued this activity at this time.

- ✓ Educational: New Utility Account Kits have been developed that contain information on the Energy Services Department, the resource mix and a variety of conservation information. The conservation information includes an energy savings tips flyer, Dixie Conservation Alert program information, a brochure on lowering power consumption during peak times specifically geared to air conditioning use as well as listing of internet resources and brochures for all of the programs offered by the Energy Services Department as well as contact information for the Conservation Coordinator. These kits are provided to all new utility account customers. The Conservation Coordinator has also designed a poster that is displayed in the Utility/Billing office that has conservation tips which change weekly. There are also conservation tips of the month on the City web page. This web page also has energy conservation web links and games for kids to play that will teach them about being conservation conscious.

Future/Proposed:

The Conservation Coordinator is working on developing other conservation programs to be implemented in the future.

- ✓ Roof Attic Fan Program: The City is located in an arid, desert climate. During the summer months the daily temperatures reach 105 or higher. These high temperatures cause the temperatures in most residential attics to rise to levels greater than 150 degrees Fahrenheit. The high attic temperatures cause the air conditioning unit to work harder to cool the interior of the home. The City provides an information pamphlet that is handed out with all new building permits. Information on attic fans has also been included in utility bill stuffers. The customers who elect to sign up will be monitored by the staff to verify reductions. A form is being developed for those who install attic fans that will provide information allowing the City to monitor which homes are equipped with attic fans. For homes that are retrofitted, the Conservation Coordinator will review the utility accounts to determine the amount of energy reduction during the summer months.
- ✓ Energy Star appliance promotion and lighting efficiency program: The City is working with Lowe's Home Improvement and the State Energy Office to develop a program to promote the installation of EnergyStar appliances and replacing incandescent light bulbs with compact fluorescent bulbs. The program consists of public education, marketing and in the future possible rebates.
- ✓ DOE Guide to Building energy Efficient Homes: The guide developed specifically for the hot, dry climate of the southwest is available through the Department of Energy (DOE). This guide will be presented to the Southern Utah Home Builders Association as a way of educating builders how to improve efficiency in the construction process. See the attached information from DOE.

SUMMARY OF DEMANDS

Summary of Proposed Demand Side Management		
Activity	Estimated Customer Participation	Estimate Peak Load Reduction
Key Account Energy Audits	15 – 30	
Dixie Conservation Alert	10,000	5 to 10 MW during peak hrs
DSM Air Conditioning Control program	-	500 kw per year
Roof Attic Fans	600 per year	350 Kw per year
EnergyStar appliances	1500 per year	400 Kw per year

SECTION 5

PROPOSED RENEWABLE ENERGY ACTIVITIES

Since 2002, the City has been very aggressive in establishing at least 15% to 30% of the resource portfolio as renewable or “green”. Currently the City has approximately 16% hydrogenation, 1% of wind and 1% of solar power. The City plans to add to each of the percentages by pursuing the following projects:

- ✓ Jordanelle Hydro Electric Project: The City is planning to enter into a long-term power sales contract with Heber Power & Light (Utah) to purchase energy output from the proposed Jordanelle Hydro Electric project which is being constructed by the Bureau of Reclamation and Central Utah Water Conservancy District at the Jordanelle Reservoir. The total amount of output is proposed to be 12 MW. The City is planning to purchase one-third of the output. This would increase the City’s Hydro portfolio by approximately 4%.
- ✓ Pacific Power Marketing (PPM) Wind Purchase: The City currently purchases 2 MW of wind energy output from PPM’s Pleasant Valley Wind Farm. The City has entered into an ancillary service contract with PPM and as part of this contract is negotiating purchase of additional wind energy above the 2 MW. The additional wind energy purchase could increase the City’s wind energy to a total of 4 MW or 2.6% of the energy resource.
- ✓ Solar Energy Net Metering Program: The City is in the process of developing a solar energy net metering program. (See program draft in appendix). The program will promote customer side solar installations following City specifications and guidelines. The solar energy production will be metered and netted out each billing cycle. The City has been working with Dixie State College to install a commercial installation at the College for the public to view an actual installation. The City as

worked with a local electrician on a test residential installation. Based on study data, solar installations and net metering could reduce the City's peak demand by 5% to 10% and increase the City's solar energy portfolio by 3%, depending on how many customers participate in the program. The staff is analyzing whether rebates may be instituted to promote solar installations.

- ✓ Clean Green Power Program: The City has developed and received approval from the City Council to promote an environmentally safe energy production program. The City has named this program "Clean Green Power" (See program pamphlet in the appendix). The program consists of soliciting customers to purchase blocks of "green" or "renewable" energy. The revenues received from this program will be used to purchase more green energy or to provide rebates to customers who install solar or similar types of green energy production devices. The program is just getting started and several customers have expressed interest and requested more information.

SECTION 6

SUPPLY SIDE ENERGY CONSERVATION ACTIVITIES

The City has on going supply side energy conservation programs. These programs are in place to reduce energy consumption prior to delivery to the customer meter. The following activities are in place:

- ✓ Distribution transformer Efficiency Ordinance: The City requires all distribution transformers installed on the system to be high efficiency and low loss designed transformers (see ordinance and criteria in appendix)
- ✓ Street Lighting Efficiency: The City requires all street lights to be high pressure sodium high efficiency lights. The light specification has been developed to promote high efficiency lighting installation.
- ✓ System Power Factor Correction: The City receives energy over a radial transmission system. This system is very voltage dependent. During peak periods significant voltage drop occurs. The voltage drop increases the amount of energy losses. The city has implemented a very aggressive program to reduce the voltage drop which requires the City maintain a 98% power factor by installing capacitors annually. The City budgets \$60,000 annually for these installations. Analysis dictates that these installations reduce the City's peak by as much as 4.5 to 6 MW's.

SECTION 7

PUBLIC PARTICIPATION

Public involvement in this IRP development process was encouraged and the input for the public was considered.

The goal of the public participation process was not necessarily to reach a consensus, but rather to develop informed consent by providing information and balancing input from all affected interest.

Public comment meetings are scheduled to be held as a public hearing format during two regularly scheduled City Council meetings in July and August of 2005. The minutes of these hearings are included in the appendix.

UAMPS was also given a copy of the IRP for comment as well. UAMPS acts as one of the City's scheduling agents.

SECTION 8

SUMMARY

MEASUREMENT AND FOLLOW UP PLAN

The City Energy Services Department will evaluate the following sections of this IRP on an annual basis:

- ✓ Energy
- ✓ Resources
- ✓ Energy load forecasts
- ✓ OEM and side activities
- ✓ Renewable energy activities

Criteria:

The energy resources will be evaluated based on energy load forecasts. The resource portfolio will be balanced as outlined in Section 3. Updates to the portfolio will be added to this IRP as an amendment and noted as such.

The demand side activities will be monitored on a monthly basis and a spreadsheet will be kept to measure estimated and actual energy savings. The monthly totals will be summarized into an annual update. If a specific activity is not producing results, it will be dropped for the IRP. If new activities are introduced during the year, they will be added to this IRP.

The renewable energy activities will be monitored based on those that are operational and those that are still under development. The operational activities production of energy will be metered and collected into a spreadsheet monthly. The monthly data will be summarized on an annual basis and compiled as an IRP update or revision.

The activities under development progress will be reported on an annual basis. If an activity is developed or is discontinued, the activity will be added/removed from this IRP. New potential activities with development potential will be added to this IRP as an addendum.

The City Conservation Coordinator will be responsible to prepare the measurement spreadsheets and annual IRP updates.

DRAFT

Appendices

Dixie Conservation Alert Program

This is the second year of this program. The program goal is to reduce the peak demand on the system that feeds not only the City of St. George but the entire county. The alerts are issued based on the projected load for the City of St. George and weather forecasts. The City of St. George load is used as it is the largest in the County and when its load is high, other loads in the County will also be high.

The alerts will be issued on Monday through Friday, excluding Federal and State holidays from June 1, 2005 through September 16, 2005. Days will be designated as **Green, Yellow or Red.**

Green Power Day for the Dixie Region **Normal Conservation Needed**

On GREEN POWER DAYS, supplies of electricity are adequate to meet expected demand. Consumers are advised to practice "Conservation 24/7".

On GREEN POWER DAYS, consumers are asked to use electricity wisely and are urged to:

- ✍ Set thermostats to a higher setting during summer. You save 3 percent for each degree the thermostat is set above 72 degree.
- ✍ Turn off lights, appliances, and electronic equipment when not in use.
- ✍ Run your dishwasher and clothes washer only when fully loaded.
- ✍ Use "energy-saving" settings on all appliances.
- ✍ Replace incandescent light bulbs with CFL bulbs.
- ✍ Use dimmers, motion sensors, or timing devices on appropriate light fixtures.

Yellow Power Day for the Dixie Region **Extra Conservation Needed**

On YELLOW POWER DAYS, **Consumers are asked to practice the normal conservation and as stated for a Green Power Day and these extra steps:**

- ✍ Avoid using electricity during peak hours, especially large appliances (2 p.m. to 8 p.m.).
- ✍ When air conditioning is used, set thermostats on air conditioners at 78 degrees or higher (if health permits).
- ✍ Use a portable/ceiling fan to enhance air flow, you will feel more comfortable with the thermostat set higher.
- ✍ Cook in a microwave oven or on an outdoor grill instead of using the electric oven.
- ✍ Turn off all unnecessary lights and electronic equipment
- ✍ Run dishwasher (with the “heat dry” option turned off) and do laundry early morning or after 8 pm. Also, consider line-drying clothing.

Red Power Day for the Dixie Region **Mandatory Conservation Needed**

Consumers are asked to practice the following mandatory conservation steps:

- ✍ Avoid using electricity. Turn off all but emergency electric needs.
- ✍ Turn off air conditioning; keep your home cool by closing drapes and blinds during the heat of the day and opening windows in the evening.
- ✍ Prepare food on outdoor grills or select foods that do not require electricity to prepare (such as sandwiches and salads).
- ✍ Those with health problems related to the heat should seek alternative shelter.

RED POWER DAYS – the most critical alert level – occur when power generation and transmission conditions are marginal threatening delivery of electricity supplies or significant voltage problems are expected for Washington County consumers. Conservation is critical to maintain electric system reliability. Consumers should voluntarily reduce their consumption of electricity to avoid involuntary “brownouts” and rolling “blackouts”.

These advisories are based on the best available data at the time of its release. Grid conditions and weather can change without warning.

8-3-7: TRANSFORMERS AND HIGH VOLTAGE EQUIPMENT:

- A. In order to assure uniformity of standards and quality in the interest of obtaining the most efficient transformation of electricity with attendant cost reductions and conservation of energy, all electrical contractors or similarly situated parties who are authorized to install electric transformers shall purchase and acquire the type, model and quality specified by the energy services department. That department shall determine the standards for such transformers in order to best accomplish the purposes intended hereby. Said department may acquire and keep on hand a supply of the specified transformers so as to make them readily available to all at a uniform price, such price to be as low as possible considering the initial acquisition cost and reasonable handling charges by the energy services department. Nothing herein shall preclude a contractor from acquiring a transformer from any other source, provided it fully meets the specifications set by the department.
- B. Included with the transformers specified by the energy services department shall be all high voltage equipment (600 volts and above), elbows, neutral ground bushings, standoffs, dummy receptacles, and related items, to the extent reasonable for attaining the desired standards. The energy services department will provide such high voltage equipment in connection with transformers purchased from it and will provide all neutral grounding associated with high voltage of any transformers purchased from it. The contractor or purchasing party shall be solely responsible in any event for site preparation, pad, placement of the transformer, ground rod and all related secondary equipment that may be required by the energy services department.
- C. Violation of this section shall be punishable as an infraction and, upon conviction, subject to penalty as provided in section 1-4-1 of this code. Each day that a transformer not conforming with this section is left in place shall be considered a separate violation of this section. (Ord. 1-7-1987, 7-2-1987; amd. 2003 Code)

NET METERING

FACT SHEET

- ✎ The Net Metering Service is available to City of St. George residential and business customers who sign up for the service.
- ✎ In order for a customer to sign up for the Net Metering service, he or she must have a solar electric generating system. This system must:
 - ✎ Be located on the customer's premises
 - ✎ Be used primarily to offset part or all of the customer's requirements for electrical energy
 - ✎ Not be greater than __ kilowatts in generating capacity.
- ✎ The customer's generating system will be connected to City of St. George's electrical system, or "grid." CSGES will inspect the customer's system prior to installation of a meter that meets the required specifications. The customer must ensure that the generating system complies with all currently applicable safety and power quality standards, and local building codes.
- ✎ The customer is responsible for all costs for the electrical generating equipment and equipment required to connect to CSGES's grid. The customer will purchase a bidirectional meter as specified by the CSGES.
- ✎ Customers are billed for the difference, over each billing period, between the energy supplied by CSGES and the energy generated by the customer which is fed back into CSGES's grid. (Energy is fed into the grid when the amount of energy being generated by the customer exceeds the amount being used.)
- ✎ If the amount of energy generated by the customer exceeds the energy demand of the customer, during the billing period, then the customer is entitled to compensation for the energy provided at the rate of \$.04 (four cents) per kwh. The amount due the customer will be refunded as a credit on the customer's bill. All applicable customer charge specified in the rate tariff will still be owed by the customer to the CSGES.
- ✎ The City of St. George will have the ownership/right to all green tags.

NET METERING

WORKSHEET

Determining Your System Cost¹

1. Cost of Solar Panels

Size of System² Cost of PV Modules³

in Watts in \$ Per Watt

_____ watts x _____ \$ per watt = \$ _____

2. Other System Equipment Costs⁴

Size of System Other System

in Watts Equipment

_____ watts _____ \$ per watt = \$ _____

3. Cost of Installations = \$ _____
4. Total System Cost (lines 1+2+3) = \$ _____

Calculating Your Energy Savings

The amount of energy that can be generated by a photovoltaic system will depend on the size of the system and the amount of time it is operated. In Southern Utah, for each peak watt that a system is rated, it will produce an estimated annual average of _____ watt-hours per day or approximately _____ kilowatt-hours (kWh) per year. Use the formula below to calculate your energy savings.

Size of System in Watts

_____ Watts x _____ kWh per year x \$0.0671 per kWh = \$ _____ Annual Savings

Calculating Your Payback

Use the formula below to calculate the simple payback on a photovoltaic system. Insert your total system cost from the previous page, and for the annual savings use the figure calculated above.

Total System Cost (Line 4) = _____ Payback (years)

Annual Savings

Note: The payback calculated above does not take into account environmental benefits.

Meter Specifications

The meter base must be compatible with the meter. It is the responsibility of the customer to install the specified meter and compatible meter base.

Single Phase Meters:

Form 2S, 3 Wire, Class 200, 2340 volt, 4 Jaw with display of KWH-delivered, KWH-received and KWH-Net as per the following:

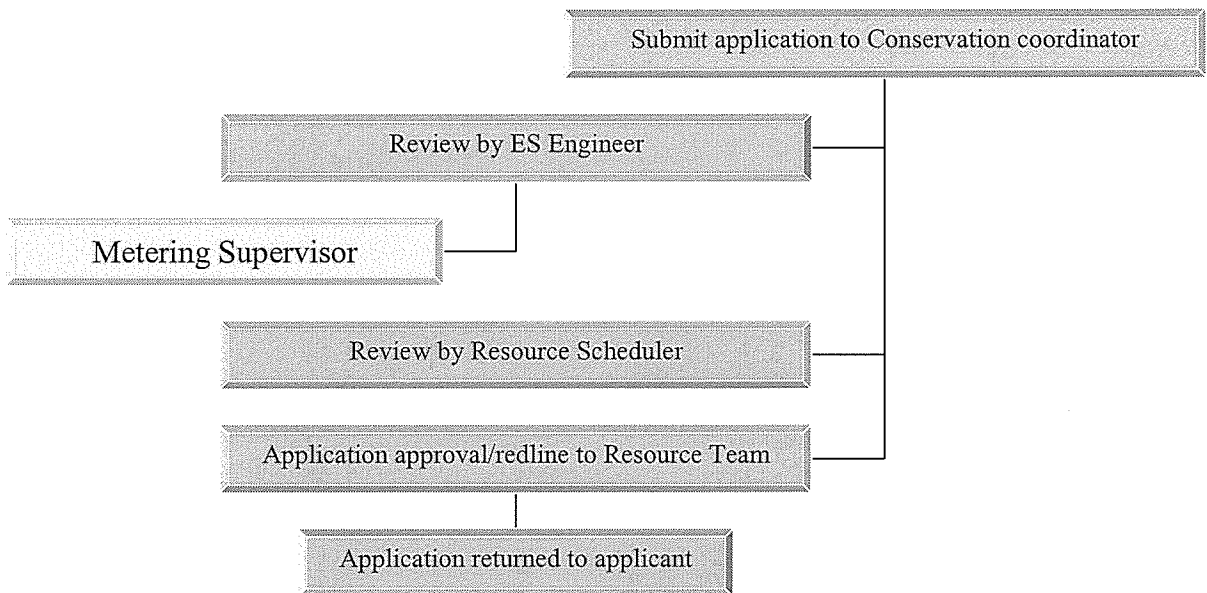
Three Phase Meters for 200 to less than 400 Amp Service:

Form 16S, 4 Wire, Class 200, multiple range voltage from 120 – 480 volt, 7 Jaw with display of KWH-delivered, KWH-received and KWH-Net. If the system request is over 200 Amp, the meter must be a Class 300.

Three Phase Meters for more than 400 Amp Service:

Form 9S, 4 Wire, Class 20, multiple range voltage from 120 – 480 volt, 13 Jaw Current Transformer (CT) meter with test switches and display of KWH-delivered, KWH-received and KWH-Net.

Meter information will be required as part of the total system submittal application.



1 City of St. George Energy Services Department
2 Net Metering Agreement
3 For Interconnection of new distributed Generation Units
4 With capacity of _____ kva or less to be operated in parallel with system distribution
5 lines.
6

7 Customer Information

8
9 Name:

10
11 Address

12
13
14 Telephone

15
16 Energy Services Information

17 City of St. George

18 175 East 200 North

19 St. George, UT 84770
20

21 Definitions:

22
23 **Net Metering:** The difference between the electricity supplied by the City of St. George
24 Energy Services Department (CSGES) and the electricity generated by an eligible
25 Customer and fed back to the electric grid over the applicable billing period.
26

27 **Dedicated Facilities:** means the equipment and facilities on the CSGES system
28 necessary to permit the operation of the Unit in parallel with CSGES's system.
29

30 **Unit:** means the distributed generation unit with a nameplate capacity of ____ kVa or less
31 located on the Customer's premises at the time CSGES approves such unit for operation
32 in parallel with CSGES system.
33

34 **SIR or Interconnection Requirements:** means the CSGES Interconnection
35 Requirements for new Distributed Generation Units with a Capacity of ____ kVa or less
36 to be operated in parallel with system Distribution lines.
37

38 **Generation Interconnection Point:** The point where the conductors are installed to
39 allow receipt of Customer's generation connect to CSGES's facilities adjacent to the
40 Customer's Point of Delivery.
41

42 **Monthly Bill:** The Electric Service Charge shall be computed in accordance with the
43 charges for the Monthly Bill in the applicable standard service tariff subject to the
44 following Special Conditions.
45

46 **Green Tags:** Tradable renewable energy certificates or renewable energy credits.

1. Term and Termination

1.1. **Term:** This agreement shall become effective when executed by both Parties and shall continue until terminated.

1.2. **Termination:** This agreement may be terminated as follows:

1.2.1. The Customer may terminate this Agreement at any time by giving CSGES sixty (60) days written notice.

1.2.2. Failure by the Customer to seek final acceptance by CSGES within twelve (12) months after the execution of this Agreement unless CSGES consents in writing to an extension. CSGES consent to such extension shall not be unreasonably withheld or delayed.

1.2.3. Either Party may, by giving the other Party at least sixty (60) days prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.

1.2.4. CSGES may, by giving the Customer prior written notice, terminate this Agreement for cause. The Customer's noncompliance with an upgrade to the SIR shall constitute good cause.

1.2.5. Failure to follow conidian in ordinance and/or agreement.

1.2.6. Failure of Customer to pay utility bill.

1.3. **Disconnection and Survival of Obligations:** Upon termination of this Agreement the Unit will be disconnected from CSGES's system. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

1.4. **Suspension:** This Agreement will be suspended during any period in which the Customer is not eligible for delivery service from CSGES.

2. SCOPE OF AGREEMENT

2.1 **Scope of Agreement:** This Agreement relates solely to the conditions under which CSGES and the Customer agree that the Unit may be interconnected to and operated in parallel with CSGES's system. This Agreement is subject in all respects to the applicable provisions of CSGES's Tariff for Electric Service (Tariff) and any amendments thereof, and to the rates, charges, rules, regulations, and conditions therein set forth, as the same may be in effect from time to time, all of which are hereby referenced and made a part hereof. CSGES's Tariff for Electric Service may be examined by the Customer at the business office of CSGES. The furnishing of service to the Customer will be subject in all respects to lawful orders, rules, or regulations of the City of St. George or of any other governmental body having jurisdiction, and CSGES will not be liable for any inconvenience or damage to the Customer from the discontinuance or change of any of CSGES's facilities or the service therewith if such discontinuance or change be required by law or by lawful order, rule, or regulation of any governmental body, by any

1 amendments to the Tariff for Electric Service or to maintain the safety or reliability of
2 CSGES's system. The provisions of CSGES's Tariff for Electric Service pertaining to its
3 liability for any loss, injury, casualty or damage of any kind are specifically incorporated
4 by reference into this Agreement and are made a part hereof. All disputes arising out of
5 this Agreement will be presented to the City of St. George for resolution in accordance
6 with the complaint procedures set forth in CSGES's Tariff for Electric Service.

7 8 9 **II INSTALLATION, OPERATION AND MAINTENANCE OF UNIT**

10 **2.1 Compliance with SIR:** Subject to the provisions of this Agreement, CSGES shall be
11 required to interconnect the Unit to CSGES's system, for purposes of parallel operation, if
12 CSGES accepts the Unit as in compliance with the SIR. The Customer shall have a
13 continuing obligation to maintain and operate the Unit in compliance with the SIR, as
14 modified or amended.

15
16 **2.2 Observation of the Unit - Construction Phase:** CSGES may, in its discretion and
17 upon reasonable notice, conduct reasonable on-site verifications during the construction
18 of the Unit. Whenever CSGES chooses to exercise its right to conduct observations
19 herein it shall specify to the Customer its reasons for its decision to conduct the
20 observation.

21
22 **2.3 Observation of the Unit - Fourteen-day Period:** CSGES may conduct onsite
23 verifications of the Unit or observe the performance of verification testing within a
24 reasonable period of time, not exceeding fourteen days, after receiving a written request
25 from the Customer to begin producing energy in parallel with CSGES's system. CSGES
26 may accept or reject the request to begin producing energy in parallel with CSGES's
27 system, consistent with the SIR, based upon the verification test results.

28
29 **2.4 Observation of the Unit - Post-Fourteen-day Period:** If CSGES does not perform
30 an on-site verification of the Unit or observe the performance of verification testing
31 within the fourteen-day period, the Customer may begin to produce energy in parallel
32 with CSGES's system after certifying to CSGES that the Unit has been tested in
33 accordance with the verification testing requirements of the SIR and has successfully
34 completed such tests. After receiving the certification, CSGES may conduct an on-site
35 verification of the Unit and make reasonable inquiries of the Customer, but only for
36 purposes of determining whether the verification tests were properly performed. The
37 Customer shall not be required to perform the verification tests a second time, unless
38 irregularities appear in the verification test report or there are other objective indications
39 that the tests were not properly performed in the first instance.

40
41 **2.5 Observation of the Unit - Operations:** CSGES may conduct on-site verification of
42 the operations of the Unit after the Unit commences parallel operations with the CSGES
43 system if CSGES has a reasonable basis for doing so based on its responsibility to
44 provide continuous and reliable service or as authorized by the provisions of CSGES's
45 Tariff relating to the verification of customer installations generally.

1 **2.6 Costs of Dedicated Facilities:** During the term of this Agreement, CSGES shall
2 design, construct and install the Dedicated Facilities. The Customer shall be responsible
3 for paying the incremental capital cost of such Dedicated Facilities attributable to
4 operating the Customer's Unit in parallel with the CSGES system. All costs associated
5 with the operation and maintenance of the Dedicated Facilities after the Unit first
6 produces energy in parallel with the CSGES system shall be the responsibility of CSGES.
7

8 **3. DISCONNECTION OF THE UNIT**

9 **3.1 Emergency Disconnection:** CSGES may disconnect the Unit, without prior notice to
10 the Customer (a) to eliminate conditions that constitute a potential hazard to CSGES
11 personnel or the general public; (b) if pre-emergency or emergency conditions exist on
12 CSGES system; (c) if a hazardous condition relating to the Unit is observed by a CSGES
13 inspection; or (d) if the Customer has tampered with any protective device required for
14 parallel operation under the SIR. CSGES shall notify the Customer of the emergency if
15 circumstances permit.
16

17 **3.2 Non-Emergency Disconnection:** CSGES may disconnect the Unit, after notice to the
18 Customer has been provided and a reasonable time to correct, consistent with the
19 conditions, has elapsed, if (a) the Customer has failed to make available records of
20 verification tests and maintenance of its protective devices; (b) the Unit interferes with
21 CSGES system or equipment belonging to other customers of CSGES; (c) the Unit
22 adversely affects the quality of service of adjoining CSGES customers.
23

24 **3.3 Disconnection by Customer:** The Customer may disconnect the Unit at any time and
25 must notify CSGES of disconnection in writing.
26

27 **4. ACCESS**

28 **4.1 Access to Premises:** CSGES shall have access, at all times, to the disconnect switch
29 of the Unit which isolates the Unit from the CSGES system. At reasonable hours and
30 upon reasonable notice consistent with Section III of this Agreement, or at any time
31 without notice in the event of an emergency (as defined in paragraph 3.1), CSGES shall
32 have access to the Unit.
33

34 **4.2 CSGES and Customer Representatives:** CSGES shall designate, and shall provide
35 to the Customer, the name and telephone number of a representative or representatives
36 who can be reached at all times to allow the Customer to report an emergency. For the
37 purpose of allowing access to the Unit, the Customer shall provide CSGES with the name
38 and telephone number of a person or persons responsible for providing access to the Unit.
39

40 **4.3 CSGES Right to Access CSGES-Owned Facilities and Equipment:** If necessary
41 for the purposes of this Agreement, the Customer shall allow CSGES access to CSGES's
42 equipment and facilities located on Customer's property. To the extent that the Customer
43 does not own all or any part of the property on which CSGES is required to locate its
44 equipment or facilities to serve the Customer under this Agreement, the Customer shall
45 secure and provide in favor of CSGES the necessary rights to obtain access to such
46 equipment or facilities, including easements if the circumstances so require.

1
2 **5. DISPUTE RESOLUTION**

3 **5.1 Good Faith Resolution of Disputes:** Each Party agrees to attempt to resolve all
4 disputes arising hereunder promptly, equitably and in a good faith manner. (Arbitration
5 required?)
6

7 **5.2 Mediation:** If a Customer complaint arises under this Agreement, the parties agree to
8 comply with the Complaint Procedures of CSGES's Tariff.
9

10 **5.3 Escrow:** If there are amounts in dispute of more than two thousand dollars (\$2,000),
11 the Customer shall either place such disputed amounts into an independent escrow
12 account pending final resolution of the dispute in question, or provide to CSGES an
13 appropriate irrevocable standby letter of credit in lieu thereof.
14

15 **6. INSURANCE**

16 **6.1 Disclosure:** The Customer is not required to provide general liability insurance
17 coverage as part of this Agreement, the SIR, or any other CSGES requirement. Due to the
18 risk of incurring damages, CSGES recommends that every distributed generation
19 customer protect itself with insurance, and requires insurance disclosure as a part of this
20 Agreement. The Customer hereby discloses as follows:
21

22 **(Note: Check off one of the boxes below.)**

23 ☐ the Customer has obtained, or already has in effect under an existing policy, general
24 liability insurance coverage for operation of the Unit and intends to maintain such
25 coverage for the duration of this Agreement (attach Certificate of Insurance or copy of
26 Policy); or

27 ☐ the Customer has not obtained general liability insurance coverage for operation of the
28 Unit and/or is self-insured.
29

30 **6.2 Effect:** By not requiring the Customer to provide general liability insurance coverage
31 for operation of the Unit in parallel with the CSGES system, CSGES does not waive any
32 rights CSGES may have to pursue remedies at law against the Customer to recover
33 damages.
34

35 **7. MISCELLANEOUS PROVISIONS**

36 **7.1 Third Parties:** This Agreement is intended solely for the benefit of the parties hereto.
37 Nothing in this Agreement shall be construed to create any duty to, or standard of care
38 with reference to, or any liability to, any person not a party to this Agreement.
39

40 **7.2 Severability:** If any provision or portion of this Agreement shall for any reason be
41 held or adjudged to be invalid or illegal or unenforceable by any court of competent
42 jurisdiction, such portion or provision shall be deemed separate and independent, and the
43 remainder of this Agreement shall remain in full force and effect.
44

45 **7.3 Entire Agreement:** This Agreement constitutes the entire Agreement between the
46 parties and supersedes all prior agreements or understandings, whether verbal or written.

1 **7.4 Waiver:** No delay or omission in the exercise of any right under this Agreement shall
2 impair any such right or shall be taken, construed or considered as a waiver or
3 relinquishment thereof, but any such right may be exercised from time to time and as
4 often as may be deemed expedient. In the event that any agreement or covenant herein
5 shall be breached and thereafter waived, such waiver shall be limited to the particular
6 breach so waived and shall not be deemed to waive any other breach hereunder.

7
8 **7.5 Applicable Law:** This Agreement shall be governed by and construed in accordance
9 with the law of the State of Utah.

10
11 **7.6 Amendments:** This Agreement shall not be amended unless the amendment(s) is in
12 writing and signed by CSGES and the Customer.

13
14 **7.7 Force Majeure:** For purposes of this Agreement, "Force Majeure Event means any
15 event: (a) that is beyond the reasonable control of the affected Party; and (b) that the
16 affected Party is unable to prevent or provide against by exercising reasonable diligence,
17 including the following events or circumstances, but only to the extent they satisfy the
18 preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods,
19 hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or
20 fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force
21 Majeure Event prevents a Party from fulfilling any obligations under this Agreement,
22 such Party will promptly notify the other Party in writing, and will keep the other Party
23 informed on a continuing basis of the scope and duration of the Force Majeure Event.
24 The affected Party will specify in reasonable detail the circumstances of the Force
25 Majeure Event, its expected duration, and the steps that the affected Party is taking to
26 mitigate the effects of the event on its performance. The affected Party will be entitled to
27 suspend or modify its performance of obligations under this Agreement, other than the
28 obligation to make payments then due or becoming due under this Agreement, but only to
29 the extent that the effect of the Force Majeure Event cannot be mitigated by the use of
30 reasonable efforts. The affected Party will use reasonable efforts to resume its
31 performance as soon as possible.

32
33 **7.8 Assignment to Corporate Party:** At any time during the term, the Customer may
34 assign this Agreement to a corporation or other entity with limited liability, provided that
35 the Customer obtains the prior written consent of CSGES and the assignee agrees in
36 writing to be bound by the terms of this Agreement. Such consent will not be withheld
37 unless CSGES can demonstrate that such proposed assignee is not reasonably capable of
38 performing the obligations of the assigning Customer under this Agreement.

39
40 **7.9 Assignment to Individuals:** At any time during the term, upon prior written notice to
41 CSGES, a Customer may assign this Agreement to another person, other than a
42 corporation or other entity with limited liability, provided that the assignee is the owner,
43 lessee, or is otherwise responsible for the Unit and agrees in writing to be bound by the
44 terms of this Agreement.

7.10 Permits and Approvals: Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit in parallel with the CSGES system during the term of this Agreement.

7.11 Limitation of Liability: Neither by inspection, if any, or non-rejection, nor in any other way, does CSGES give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer or leased by the Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

**CITY OF ST. GEORGE ENERGY SERVICES DEPARTMENT
FOR SINGLE PHASE ATTACHMENT OF PARALLEL DISTRIBUTED
GENERATION EQUIPMENT 15 Kva OR SMALLER**

Customer:

Name: _____ **Phone:** () _____

Address: _____ **Municipality:** _____

Consulting Engineer or Contractor:

Name: _____ **Phone:** () _____

Address: _____

Estimated In-Service Date: _____

Existing Electric Service:

Capacity: _____ **Amperes Voltage:** _____ **Volts**

Service Charter: () Single Phase () Three Phase

Location of Protective Interface Equipment on Property:

(include address if different from customer address)

Signature: _____

CUSTOMER SIGNATURE TITLE DATE

**CITY OF ST. GEORGE ENERGY SERVICES DEPARTMENT
FOR ATTACHMENT OF PARALLEL DISTRIBUTED GENERATION
EQUIPMENT GREATER THAN 15 kVA BUT NOT EXCEEDING 300 kVA**

Customer:

Name: _____ **Phone:** () _____

Address: _____ **Municipality:** _____

Consulting Engineer or Contractor:

Name: _____ **Phone:** () _____

Address: _____

Estimated In-Service Date: _____

Existing Electric Service:

Capacity: _____ **Amperes Voltage:** _____ **Volts**

Net Metering

Ordinance #

DEFINITIONS:

Net Metering: The difference between the electricity supplied by the Company and the electricity generated by an eligible Customer and fed back to the electric grid over the applicable billing period.

Dedicated Facilities: means the equipment and facilities on the City of St. George Energy Services (CSGES) system necessary to permit the operation of the Unit in parallel with CSGES's system.

Unit: means the distributed generation unit with a nameplate rated capacity of 25 kVa or less located on the Customer's premises at the time CSGES approves such unit for operation in parallel with CSGES system.

Generation Interconnection Point: The point where the conductors installed to allow receipt of Customer's generation connect to CSGES's facilities adjacent to the Customer's Point of Delivery.

Monthly Bill: The Electric Service Charge shall be computed in accordance with the charges for the Monthly Bill in the applicable standard service tariff subject to the following Special Conditions.

Green Tags: Tradable renewable energy certificates or renewable energy credits.

Special Conditions:

- ✓ If the energy supplied by the CSGES exceeds the energy generated by the Customer and delivered to the CSGES, the customer shall be billed for the appropriate power and other non-energy charges and the prices specified in the Energy Rate section of the Monthly Billing of the applicable standard service tariff shall be applied to the net positive balance owed to CSGES.
- ✓ If the energy generated by the customer and delivered to CSGES exceeds the energy supplied by the CSGES, the Customer shall be billed for the appropriate power and non-energy charges and:
 - Customers shall be financially credited for such net energy at the rate set in the tariff.
- ✓ The Customer shall execute an interconnection agreement with CSGES prior to interconnection of Eligible Generating Plant with CSGES's system. The Customer shall provide the interconnection on the Customer's side of the meter. The Customer is responsible for all costs associated with the Eligible Generating Plant and interconnections facilities, including additional

metering necessary for service under this rate schedule. At Customer's expense, CSGES shall make reasonable modifications to the CSGES system necessary to accommodate the Customer's facility. The payment for such modifications is due in advance of construction. The Customer shall provide at the Customer's expense all equipment that is necessary to meet applicable local, state and national standards regarding electrical and fire safety, power quality, and interconnection requirements established by the National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, American National Standards Institute and Underwriters Laboratories.

- ✓ CSGES written approval of the Customer's protection-isolation method to ensure generator disconnection in case of a power interruption from CSGES is required before service is provided under this schedule.
- ✓ CSGES shall not be obligated to accept, and CSGES may require the Customer to curtail, interrupt or reduce deliveries of energy if CSGES, consistent with prudent electrical practices, determines that curtailment, interruption or reduction is necessary because of line construction or maintenance requirements, emergencies or other critical operating conditions on its system.
- ✓ The Customer shall never deliver or attempt to deliver energy to the CSGES's system when CSGES's system serving the Customer's generation facility is de-energized for any reason. Customer's generation facility will have an automatic shut off device to prevent delivery when the CSGE's is de-energized.
- ✓ CSGES shall not be liable directly or indirectly for permitting or continuing to all an attachment of a net metering facility, or for the acts or omissions of the Customer that cause loss or injury, including death, to Customer or any third part.
- ✓ The Customer shall grant to CSGES access to all CSGES equipment and facilities including adequate and continuing access rights to the property of the Customer for the purpose of installation, operation, maintenance, replacement or any other service required of said equipment. CSGES may test and inspect an interconnection at times that it considers necessary to ensure the safety of electrical workers and to preserve the integrity of the electric power grid.
- ✓ CSGES is granted any and all applicable Green Tags associated with Customer's system.

Electrical Service Regulations: Service under this Schedule will be in accordance with the terms of the Electric Service Agreement between the Customer and CSGES.

1 **Restriction on use of system for obtaining solar energy:** A governing body shall not
2 adopt by ordinance, regulation or plan or take any other action that prohibits or
3 unreasonably restricts the owner of real property from using a system for obtaining solar
4 energy on his/her property. Any covenant, restriction or condition contained in a deed,
5 contract, or other legal instrument which affects the transfer, sale or any other interest in
6 real property, that prohibits or unreasonable restrictions the owner of the property from
7 using a system for obtaining solar energy on his/her property is void and unenforceable.
8 For the purposes of this section “unreasonably restricting the use of a system for
9 obtaining solar energy” means placing a restriction or requirement on the use of such a
10 system which significantly decreases the efficiency or performance of the system and
11 does not allow for the use of an alternative system at a comparable cost with comparable
12 efficiency performance.

DRAFT



May 31, 2005

DOE Offers Free Guide to Building Energy Efficient Homes in the American Southwest
Outlines Ways Homes in Hot, Dry Climates Can Reduce Energy Use by 30 Percent

WASHINGTON, D.C. – As part of the continuing effort to provide consumers guidance on saving money through improving home energy efficiency, the U.S. Department of Energy (DOE) today issued a free guide to the construction of energy-efficient homes specifically in the hot, dry climate of the American Southwest.

"Homes use nearly 21 percent of Americans' total energy use," said Secretary of Energy Samuel W. Bodman. "This useful guide will help American families save money and energy when building new homes in the arid southwest."

The second guide in the Building America Best Practices series, "Volume 2: Hot-Dry, Mixed-Dry" addresses the challenge of maximizing energy efficiency while preserving the comfort of homes in hot-dry and mixed-dry climates. Equipped with this guide, builders and home owners will be able to build high-quality, energy-efficient homes that can save 30 percent in space conditioning and water heating each year in hot-dry and mixed-dry climates.

DOE's regional building guides offer tips to families and contractors on how to build energy-saving homes in different climates across the country. DOE's Building America program conducts and sponsors research and development in building technologies aimed at improving the comfort and efficiency of American homes, while reducing their need for electricity.

Volume 1 of the Best Practices series, focusing on hot-humid construction, was published earlier this year. Upcoming releases in this series will include Volume 3: Cold-Severe Cold, available June 22; Volume 4: Mixed Humid, available July 29; and Marine, available in early 2006. For more details and to download these guides, please visit the Building America website at http://www.eere.energy.gov/buildings/building_america/.

Media contact: Chris Kielich, 202/586-5806

Number: R-05-127